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EXAMINER

CHANKONG, DOHM

ART UNIT

PAPER NUMBER

2152

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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3 MONTHS

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | | |
|------------------------------|------------------------|--|---------------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 09/844,759 | | GARCIA-LUNA-ACEVES ET AL. | |
| | Examiner | | Art Unit | |
| | Dohm Chankong | | 2152 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,6-12 and 14-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,6-12 and 14-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1> This action is in response to Applicant's request for continued examination. Claims 1, 2, 7 and 10 are amended. Claims 1, 2, 6-12 and 14-17 are presented for further examination.

2> This is a non-final rejection.

Continued Examination Under 37 CFR 1.114

3> A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3.8.2007 has been entered.

Response to Arguments

4> Applicant's arguments with respect to claims 1, 2, 6-12 and 14-17 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5> Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claim 1 states "resolving the request to a corresponding unicast network address" but it is unclear if the specified request refers to the "request for an information object" or the "request to resolve the anycast network address."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6> Claims 1, 2, 5, 6, 7, 8, 10, 11 and 16 are rejected under 35 U.S.C § 103(a) as being anticipated by McCanne et al, U.S Patent No. 6,415,323 ["McCanne"], in view of Yamano, U.S Patent No. 6,314,088, in further view of Horikawa et al, U.S Patent No. 5,822,320 ["Horikawa"].

7> Horikawa was cited the Office in PTO-892, filed 8.13.2004.

8> As to claim 1, McCanne discloses a method comprising:

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selecting an information object repository to receive a request for an information object at an anycast network address, wherein the request comprises a single IP packet that includes the network layer anycast address [column 3 «lines 62-67» | column 8 «lines 10-13» : see response to arguments above];

receiving a request at an information object repository for an information object at an anycast network address [column 8 «lines 14-23» | column 11 «lines 58-62» where : McCanne's ARN and the service nodes are analogous to repositories].

resolving the request to a corresponding unicast address for the information object [column 11 «lines 60-62» | column 15 «line 61» to column 16 «line 35» where : McCanne's service nodes have unicast addresses].

McCanne does not explicitly disclose instructing the information object repository to obtain a copy of the information object at the corresponding unicast address.

McCanne does not expressly disclose (1) a second request to resolve the anycast network address. McCanne does disclose returning an anycast resolution response, the anycast resolution response comprising a single IP packet having the corresponding unicast network address [column 10 «lines 40-43» | column 16 «lines 17-29» : a redirection message that directs a client to a "normally-addressed and routed (unicast) service node"] but does not disclose (2) the response is in response to a request to resolve the anycast address.

9> With respect to (1) McCanne does disclose that the repository is capable of servicing the clients' requests directly but does not explicitly disclose obtaining a copy at the corresponding unicast address [column 14 «lines 27-32» | column 16 «lines 3-11»]. Yamano

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discloses a repository (that receives an request for an object at an anycast address) that obtains a copy of the requested information object at a corresponding unicast address [Figure 5 | column 1 «lines 21-30» | column 4 «lines 30-36» | column 5 «line 64» to column 6 «line 15» where : Yamano's configuration server node 11 retrieves the object requested by the client from another server node's ATM address (unicast)]. Therefore Yamano teaches that a repository, that acts as a redirector such as one seen in McCanne, can also retrieve content from other repositories within the network. One of ordinary skill in the art would have been able to incorporate Yamano's functionalities into McCanne's repository (redirector) to allow the repository to retrieve content from other repositories at the corresponding unicast address to be able to directly service the request in the future. Since McCanne already teaches that his repository can directly handle content requests, implementing Yamano's teaching would only enhance McCanne's capabilities.

10> With respect to (2), Horikawa discloses a client sending two requests, one of the requests being a request to resolve the anycast network [column 5 «lines 33-37 and 49-54» | column 7 «lines 40-51»]. It would have been obvious to one of ordinary skill in the art to incorporate Horikawa's teachings into McCanne's proximity redirection system. One would have been motivated to combine the references in such a manner because Horikawa teaches that a benefit of the request to resolve improves upon traditional address resolution systems [column 3 «lines 36-48»].

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11> As to claim 2, McCanne discloses the method of claim 1 further comprising returning the unicast address for the information object [column 10 «lines 35-43»].

12> As to claim 6, McCanne discloses the method of claim 5 wherein the performance metrics comprise one or more of: reliability of a path from the selected information object repository, available bandwidth in said path, average delay from the selected information object repository to a source of the request, average processing delay at the selected information object repository and loads on the selected information object repository [column 17 «lines 45-46» | column 18 «lines 64-67» : monitors load characteristics].

13> As to claims 7 and 10, as they do not teach or further define over the prior art references, they are similarly rejected for at least the same reasons set forth for claim 1.

14> As to claim 8, McCanne discloses the information object repository of claim 7 being further configured to resolve the network layer anycast address by transmitting a request for the network layer unicast address and awaiting a response thereto [column 11 «lines 24-36 and lines 58-65», column 12 «lines 16-24» and column 13 «lines 35-42»].

15> Claim 11 is a network that contains the information object repository of claim 8. Therefore claim 11 is rejected for the same reasons as set forth in above paragraph 12 for claim 8.

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16> As to claim 16, McCanne discloses the request is received at an information object repository selected without regard as to whether the information object is actually stored at the information object repository [column 8 «lines 14-23» | column 11 «lines 58-62» where : McCanne stresses that the only requirement for directing a client to a service node is that the node is the closest to the client; therefore, the implication is that there is no regard as to whether or not the content is on the service node].

17> Claims 9, 12 and 15 are rejected under 35 U.S.C 103(a) as being unpatentable over McCanne, Yamano and Horikawa, in further view of an Kraft, U.S Patent No. 6.529.939.

18> As to claim 9, McCanne discloses the information object repository of claim 7 to monitor if the request for the network layer unicast address is not received within a timeout period [column 13 «lines 35-36»] but does not specifically disclose that a failure message is sent to the source of the request for the information object.

19> Kraft discloses updating the client about the failure of an information request when a response to the request is not received within a certain timeout period [column 3 «lines 25-37»]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement this failure message utility into McCanne's information object repository to keep the clients informed that their request for information could not be handled at the specified unicast address and to signal to the user to reconnect to the service after losing the connection [see Kraft, column 3 «lines 38-60»].

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20> Claim 12 is a network that contains the information object repository of claim 9.

Therefore claim 12 is rejected for the same reasons as set forth in above paragraphs 18 and 19 for claim 9.

21> As to claim 15, McCanne discloses the network of claim 14 wherein the response to the request for the network layer unicast address is returned by a host having the network layer unicast address [column 16 <lines 18-26> where: 'S' is the host with the network layer unicast address].

22> Claim 17 is rejected under 35 U.S.C §103(a) as being unpatentable over McCanne, Yamano, Horikawa and Kraft in view of McCanne, U.S Patent No. 6,611,872 ["McCanne.2"].

23> As to claim 17, McCanne does not disclose the single IP packet comprising the request for the network layer unicast address and the single IP packet comprising the response to the request for the network layer unicast address further comprise an IP header and a UDP header.

24> However, in the same field of invention, McCanne.2 discloses that the single IP packet comprising the request for the network layer unicast address and the single IP packet comprising the response to the request for the network layer unicast address further comprise an IP header and a UDP header [Figure 6 «items 204, 210, 220» (where overlay header is in

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UDP format) | column 4 «lines 54-56» | column 30 «lines 30-41» where : the packets sent through the network all have an IP header and a UDP overlay header]. It would have been obvious to one of ordinary skill in the art to modify McCanne's packets to include both IP and UDP headers as taught by McCanne.2. The benefits of incorporating both protocol headers into a packet enable "clients to connect to overlay routers using unicast UDP or TCP through a redirection and location service" [McCanne.2, column 4 «lines 3-8»]. Note that McCanne is directed towards providing a redirection and location service [abstract].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dohm Chankong whose telephone number is 571.272.3942. The examiner can normally be reached on Tuesday-Friday [7:30 AM to 4:30 PM].

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571.272.3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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